WATER SUPPLY OUTLOOK
and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS
for
MONTANA

UNITED STATES DEPARTMENT of AGRICULTURE···SOIL CONSERVATION SERVICE,
and
MONTANA AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies named above in cooperation with Federal, State and private organizations listed on the last page of this report

AS OF
MAY 1, 1963

UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

To Recipients of Water Supply Outlook Reports:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from advance estimates of the streamflow.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, up to 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1400 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

Streamflow forecasts are obtained by a comparison of total or maximum snow accumulation, as measured by snow water equivalent, to the subsequent spring and summer or snowmelt season runoff over a period of years. The snow water equivalent measured in selected snow courses provides most of the index to the streamflow forecast for the following season. More accurate forecasts are usually obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast procedure. Early season forecasts assume average climatic conditions through the snowmelt season.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions. Soil Conservation Service Reports may be secured from Water Supply Forecasting Unit, Soil Conservation Service, P.O. Box 4170, Portland 8, Oregon.

PUBLISHED BY SOIL CONSERVATION SERVICE

REPORTS	ISSUED	LOCATION	COOPERATING WITH
RIVER BASINS			
WESTERN UNITED STATES	MONTHLY (FEB.-MAY)	PORTLAND, OREGON	ALL COOPERATORS
STATES			
ALASKA	MONTHLY (MAR.-MAY)	PALMER, ALASKA	ALASKA S.C.D.
ARIZONA	SEMI-MONTHLY (JAN.15 - APR.1)	PHOENIX, ARIZONA	SALT R. VALLEY WATER USERS ASSOC. ARIZ. AGR. EXP. STATION
COLORADO AND NEW MEXICO	MONTHLY (FEB.-MAY)	FORT COLLINS, COLORADO	COLO. STATE UNIVERSITY COLO. STATE ENGINEER N. MEX. STATE ENGINEER
IDAHO	MONTHLY (JAN.-JUNE)	BOISE, IDAHO	IDAHO STATE RECLAMATION ENGINEER
MONTANA	MONTHLY (JAN.-JUNE)	BOZEMAN, MONTANA	MONT. AGR. EXP. STATION
NEVADA	MONTHLY (JAN.-MAY)	RENO, NEVADA	NEVADA DEPT. OF CONSERVATION AND NATURAL RESOURCES - DIVISION OF WATER RESOURCES
OREGON	MONTHLY (JAN.-JUNE)	PORTLAND, OREGON	OREG. STATE UNIVERSITY OREGON STATE ENGINEER
UTAH	MONTHLY (JAN.-JUNE)	SALT LAKE CITY, UTAH	UTAH STATE ENGINEER
WASHINGTON	MONTHLY (FEB.-JUNE)	SPOKANE, WASHINGTON	WN. STATE DEPT. OF CONSERVATION
WYOMING	MONTHLY (FEB.-JUNE)	CASPER, WYOMING	WYOMING STATE ENGINEER

PUBLISHED BY OTHER AGENCIES

REPORTS	ISSUED	AGENCY
BRITISH COLUMBIA	MONTHLY (FEB.-JUNE)	WATER RIGHTS BR., DEPT. OF LANDS, FORESTS AND NATURAL RESOURCES, PARLIAMENT BLDG., VICTORIA, B.C., CANADA
CALIFORNIA	MONTHLY (FEB.-MAY)	CALIF. DEPT. OF WATER RESOURCES, P.O. BOX 388, SACRAMENTO, CALIF.

WATER SUPPLY OUTLOOK

FEDERAL-STATE-PRIVATE COOPERATIVE SNOW SURVEYS

for

MONTANA

Report Prepared
By

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Issued By

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Soil Conservation Service
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MONTANA
WATER SUPPLY OUTLOOK
May 1, 1963

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*                                               *
* The water supply outlook has improved during  *
* the past month, but late season shortages of  *
* irrigation water may be expected  in  some    *
* areas.                                        *
*                                               *
* * * * * * * * * * * * * * * * * * * * * * * * *
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The snow pack at higher elevations was increased during April by cool temperatures that delayed snow melt and by precipitation during the past month.

Snow surveys made near the first of May indicate the mountain snow pack is near or above average on most drainages East of the divide and generally below average West of the divide. The snow pack in the Jefferson River drainage is 155 percent of last year and 109 percent average. In the Madison drainage it is 117 percent of last year and 108 percent average. The Gallatin River drainage has a snow pack that is 111 percent of a year ago and 106 percent average. On tributaries to the main stem of the Missouri above Great Falls, the snow pack is 156 percent of last year and 111 percent average. In the Sun, Marias and Milk River drainages the pack is 83 percent of last year and 72 percent average. The Upper Yellowstone River drainage snow pack is 136 percent of last year and 111 percent average.

West of the divide the upper reaches of the Clark Fork drainage, including the Blackfoot, has a mountain snow cover that is 113 percent of last year and 115 percent average.

MONTANA
WATER SUPPLY OUTLOOK
May 1, 1963

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*                                                     *
*  The water supply outlook has improved during       *
*  the past month, but late season shortages of       *
*  irrigation water may be expected in some           *
*  areas.                                             *
*                                                     *
* * * * * * * * * * * * * * * * * * * * * * * * * * * *
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The snow pack at higher elevations was increased during April by cool temperatures that delayed snow melt and by precipitation during the past month.

Snow surveys made near the first of May indicate the accumulation snow pack is near or above average on most drainages east of the divide and generally below average west of the divide. The snow pack in the Jefferson River drainage is 155 percent of last year and 108 percent average. In the Madison drainage it is 117 percent of last year and 108 percent average. The Gallatin River drainage has a snow pack that is 111 percent of a year ago and 106 percent average. On tributaries to the main stem of the Missouri above Great Falls, the snow pack is 150 percent of last year and 111 percent average. In the Sun, Marias and Milk River drainages the pack is 83 percent of last year and 72 percent average. The Upper Yellowstone River drainage snow pack is 136 percent of last year and 111 percent average.

West of the divide the upper reaches of the Clark Fork drainage, including the Blackfoot, has a complete snow cover that is 113 percent of last year and 115 percent average.

The Lower Clark Fork drainage snow pack is 80 percent of last year and 79 percent average. The Flathead River headwaters are covered with a snow pack that is 83 percent of last year and 75 percent average. The Bitterroot drainage has 94 percent of last year and 83 percent average snow pack. In the Kootenai drainage, snow cover in Montana and Canada is 92 percent of last year and 72 percent average.

May through September streamflow from the headwaters of the Missouri River is forecast to be 20 to 30 percent below average on the Madison and Jefferson Rivers, and 5 percent below average on the Gallatin River. Some late season shortage is still expected in the Red Rock drainage.

In the Yellowstone River drainage, streamflow is forecast to be 10 to 25 percent below average.

West of the divide, streamflow in the headwaters area of the Clark Fork is expected to be about 15 percent below average, dropping to 25 percent below average near the Idaho border. Tributaries of the Flathead River are forecast at 75 to 90 percent flow. In the Bitterroot drainage, some shortage of late season irrigation water may be expected. Streamflow is forecast to be 65 to 70 percent average.

Storage in irrigation reservoirs is generally slightly below to near average.

Storage in power reservoirs is generally above average.

The Lower Clark Fork drainage snow pack is 30 percent of last year and 72 percent average. The Flathead River headwaters are covered with a snow pack that is 83 percent of last year and 75 percent average. The Bitterroot drainage has 94 percent of last year and 87 percent average snow pack. In the Kootenai drainage, snow cover in Montana and Canada is 72 percent of last year and 72 percent average.

May through September streamflow from the headwaters of the Kootenai River is forecast to be 20 to 30 percent below average on the Kootenai and Lightning Rivers, and 5 percent below average on the Yaak River. Some late season storage is still expected in the Lake Koocanusa drainage.

In the Yellowstone River drainage, streamflow is forecast to be 10 to 25 percent below average.

West of the divide, streamflow in the headwater area of the Clark Fork is expected to be about 15 percent below average, dropping to 25 percent below average near the Idaho border. Tributaries of the Flathead River are forecast at 75 to 90 percent flow. In the Bitterroot drainage, snow storage of late season irrigation water may be expected. Streamflow is forecast to be 65 to 70 percent average.

Storage in irrigation reservoirs is currently slightly below to near average.

Storage in power reservoirs is currently above average.

SNOW SURVEY COURSES
AND SOIL MOISTURE STATIONS
IN
MONTANA
LEGEND
TOWNS AND CITIES
13D4 SNOW SURVEY COURSE
13D4M SOIL MOISTURE STATION
DRAINAGE BOUNDARIES
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE
BOZEMAN MONTANA
SCALE IN MILES
50 25 0 50 100
REVISED 12-62
5,R-11,484
KOOTENAI
ST. MARY
MILK
MARIAS
MILK
FLATHEAD
TETON
SUN
MAIN STEM
BLACKFOOT
MISSOURI
JUDITH
MUSSELSHELL
LOWER YELLOWSTONE
BITTERROOT
CLARK FORK
BIG HOLE
JEFFERSON
GALLATIN
UPPER YELLOWSTONE
BEAVERHEAD
RUBY
MADISON
FORT PECK RESERVOIR
SOUTH DAKOTA
MONTANA
WYOMING
IDAHO

INDEX TO MONTANA SNOW COURSES AND SOIL MOISTURE STATIONS

INDEX TO MONTANA SNOW COURSES AND SOIL MOISTURE STATIONS

Drainage Basin & Course Name	Number	Elev.	Location Sec. Lat.	Twp.	Range Long.	Record Began	Measuring Dates 1/	Measured By 2/
COLUMBIA RIVER BASIN								
KOOTENAI RIVER								
Baree Creek	15B11	5500	6	25N	30W	1937	4,5,5½	2
Brush Creek	14A4	5000	13	30N	26W	1937	3,4,5	1,2
Red Mountain	15A1	6000	4	36N	29W	1937	3,4,5,5½,6	1,2
Weasel Divide	14A7	5450	8	37N	24W	1937	3,4,5,5½,6	1,2
FLATHEAD RIVER								
Basin Creek	13B1LA	5000	11	19N	12W	1951	2,3,4,5	1
Bassoo Creek	14B3	5150	11	24N	25W	1960	3,4,5	1,5
Big Creek	13B3	6750	7	22N	18W	1941	3,4,5 6	1,5
Camp Misery	13A17	6400	30	28N	18W	1962	3,4,5	1,2
Desert Mountain	13A2	5600	24	31N	19W	1937	1,2,3,4,5 6	1,2
Fatty Creek	13B4	5500	4	22N	18W	1962	3,4,5, 6	1,5
Griffin Creek Divide	14A9	5150	11	28N	25W	1960	3,4,5	1,5
Hell Roaring Divide	14A3	5770	35	32N	22W	1942	3,4,5,5½,6	1
Holbrook	13B13A	4530	18	21N	13W	1951	2,3,4,5	1
Kishenehn	14A6	3886	14	37N	22W	1954	3,4	6
Logan Creek	14A5	4300	34	30N	24W	1937	3,4,5	1,2
Marias Pass	13A5	5250	34	30N	10W	1934	1,2,3,4,5	3
Mineral Creek	13A16	4000	29	35N	17W	1939	3,4	6
North Fork Jocko	13B7	6330	3	17N	17W	1941	3,4,5,5½,6	1,5
Quintonkon	13A13	3800	11	26N	17W	1951	4	1,2
Spotted Bear Mt.	13B2	7000	23	25N	15W	1948	1,2,3,4,5	1,2
Strawberry Lake	13A10	6500	11	28N	19W	1948	3,4,5	1
Trinkus Lake	13B1	6500	9	25N	17W	1948	3,4,5	1
Trout Lake	13A12	3600	21	28N	17W	1948	1,2,3,4,5	1,2
Twin Creeks	13B11	3580	14	26N	16W	1951	3,4,5	1,2
Upper Holland Lake	13B5	7000	28	20N	16W	1948	3,4,5	1
CLARK FORK RIVER								
Black Pine	13C13	7200	23	8N	15W	1959	3,4,5	1
Copper Creek	12B10	5790	1	15N	9W	1962	3,4	1
Cotter Mine	12B11	6250	2	15N	9W	1962	3,4	1
Coyote Hill	13B10	4200	12	18N	16W	1947	1,2,3,4,5	1,2
El Dorado Mine	13C9	7800	23	8N	12W	1949	3,4	1
Fred Burr Pass	13C11	8000	12	6N	13W	1957	3,4,5	1
Gold Creek Lake	13C10	7200	14	8N	12W	1949	3,4	1
Hoodoo Creek	15C1	6200	9	14N	27W	1937	3,4,5	1,2
Intergaard	13C4	6450	6	5N	13W	1936	2,3,4	4
Lubrecht Forest #6	13C8	4040	11	13N	14W	1951	1,2,3,4,5	8
Red Lion	13C12	7000	27	6N	13W	1958	3,4,5	1
Skalkaho Summit	13C3	7259	30	6N	17W	1937	3,4,5,5½,6	1
Slide Rock Mt.	13C2	7100	35	10N	16W	1937	3,4,5	1
Southern Cross	13C5	6500	8	5N	13W	1936	2,3,4	4
Storm Lake	13C7	7780	19	4N	13W	1939	1,2,3,4,5	1
Stuart Mill	13C6	6500	19	5N	13W	1936	2,3,4	4
T.V. Mountain	14B1	6800	33	15N	19W	1956	1,2,3,4,5	1
BITTERROOT RIVER								
Ambrose	13C16	6475	28	9N	18W	1960	3,4,5	1
East Fork R.S.	13D1	5400	16	2N	17W	1937	3,4	1
Gibbons Pass	13D2	7100	4	2S	19W	1934	1,2,3,4,5,5½,6	1,3
Lost Horse	14C7	5940	5	4N	23W	1960	3,4,5	1
Nez Perce Camp	14D2	5580	19	1S	23W	1937	3,4,5	1
Nez Perce Pass	14D1	6575	25	1S	24W	1937	3,4,5	1
Twin Lakes	14C8	6510	32	5N	23W	1960	3,4,5	1
SASKATCHEWAN RIVER BASIN								
ST. MARY RIVER								
Iceberg Lake #3	13A3	5600	34	36N	16W	1922	5	3,9
Josephine Lower #9	13A14	4900	10	35N	16W	1955	5	3,9
Mount Allen #7	13A7	5700	22	35N	16W	1922	5	3,9
Piegan Pass #6	13A6	5500	15	35N	16W	1922	5	3,9
Ptarmigan #8	13A8	5800	32	36N	16W	1937	5	3,9
MISSOURI RIVER BASIN								
BEAVERHEAD RIVER								
Bloody Dick	13D10	7600	12	8S	16W	1948	3,4	1
Carter Creek	12D4	7400	22	8S	7W	1963	3,4	1
Gold Stone	13D9	8100	11	8S	16W	1948	3,4	1
Lakeview Canyon	11E4	6930	26	14S	2W	1948	3,4,5	10
Lakeview Ridge	11E3	7400	27	14S	2W	1948	3,4,5	10
Lemhi Pass	13E1	7480	9	10S	15W	1948	3,4	1
Trail Creek	13E2	7090	15	10S	15W	1948	3,4	1
White Pine Ridge	12E1	8850	18	14S	9W	1948	3,4,5	1
RUBY RIVER								
Clover Meadow	11D8	8600	28	9S	2W	1963	3,4,5	1
Divide	12E7	7900	14	12S	4W	1963	3,4,5	1
Notch	12E6	8500	18	1S	4W	1963	3,4,5	1
BIG HOLE RIVER								
Abundance Lake	13D20	8800	7	3S	12W	1963	3,4,5	1
Darkhorse Lake	13D19	8600	4	8S	16W	1963	3,4,5	1
Elk Horn Springs	13D15	8000	15	4S	12W	1935	3,4,5	3
Foolhen	13D21	8500	14	1S	13W	1963	3,4,5	1
Jahnke Creek	13D8	7340	25	7S	16W	1948	3,4	1
JEFFERSON RIVER								
Berry Meadow	12C7	7300	17	5N	5W	1962	3,4	1
Picnic Grounds	12C6	6500	10	5N	6W	1941	2,3,4	4
Pipestone Pass	12D1	7200	10	1N	7W	1938	1,2,3,4,5	1

4/Missouri River Basin cont'd

Drainage Basin & Course Name	Number	Elev.	Location Sec. Lat.	Twp.	Range Long.	Record Began	Measuring Dates 1/	Measured By 2/
MADISON RIVER								
Cell Road	11D7	8050	21	8S	2W	1962	3,4,5	1
Crockett Lake	11D6	8400	20	8S	2W	1962	3,4,5	1
Hebgen Dam	11D5	6550	22	11S	3E	1934	1,2,3,4,5	3
Jack Creek	11D5	6800	13	6S	1E	1961	3,4	1
North Meadow	11D3	7500	23	3S	3W	1961	3,4	1
West Yellowstone	11D7	6700	34	13S	5W	1934	1,2,3,4,5	3
GALLATIN RIVER								
Devil's Slide	10D4	8100	14	5S	6E	1935	2,3,4,5, 6	1
Hood Meadow	10D3	6600	22	4S	6E	1935	2,3,4,5	1
New World	10D1	6700	24	3S	6E	1939	2,3,4	1
Twenty-One Mile	11E6	7150	1	11S	5E	1934	1,2,3,4,5	3
MISSOURI RIVER MAIN STEM								
Chessman Reservoir	12C5	6200	2	8N	5W	1936	1,2,3,4,5	3
Crystal Lake	9C1	6100	19	12N	18E	1941	3,4	1
Elk Peak	10C7	8000	10	8N	8E	1963	3,4	1
Grasshopper	10C2	7000	19	9N	8E	1938	3,4	1
Kings Hill	10C1	7500	35	13N	7E	1934	3,4,5	3
Rocky Boy	9A1	5200	15	28N	16E	1941	3,4	7
Stemple Pass	12C1	6900	16	13N	7W	1934	3,4,5	3
Ten Mile Creek L.	12C2	6250	13	8N	6W	1935	1,2,3,4,5	3
Ten Mile Creek M.	12C3	6800	13	8N	6W	1934	1,2,3,4,5	3
Ten Mile Creek U.	12C4	8000	19	8N	5W	1935	1,2,3,4,5	3
SUN-TETON-MARIAS RIVERS								
Benchmark	12B8	5500	9	20N	10W	1948	3,4	1
Cabin Creek	12B6	5400	33	23N	10W	1949	3,4	1
Five-Bull	12B9	5600	36	20N	10W	1948	3,4	1
Freight Creek	12A1	6000	13	26N	10W	1948	3,4	1
Gates Park	12B5	5300	31	24N	10W	1949	3,4	1
Goat Mountain	12B7	7000	20	22N	10W	1934	3,4,5	3
Waldron Creek	12B2	5600	16	25N	9W	1948	3,4	1
West Fork	12B1	6000	6	25N	9W	1948	3,4	1
Wrong Creek	12B4	5700	32	25N	10W	1949	3,4	1
Wrong Ridge	12B3	6800	17	25N	10W	1949	3,4	1
JUDITH RIVER								
Spur Park	10C6	8000	20	12N	9E	1963	3,4	1
UPPER YELLOWSTONE RIVER								
Bald Ridge	10C5	7500	11	4N	10E	1961	3,4	1
Camp Senia	9D1	7890	2	8S	18E	1937	3,4,5	1
Cooke City	10D7	7400	25	9S	14E	1937	1,2,3,4,5	6
Crevice Mt.	10D5	8400	22	9S	9E	1935	3,4	2
Gertrude Lake	9D3	9250	10	8S	18E	1961	3,4,5	1
Grizzly Peak	9D5	8400	26	7S	19E	1961	1,2,3,4,5	1
Independence	10D6	8000	22	7S	12E	1940	3,4,5	1
Monument Peak	10D12	9000	22	7S	12E	1961	3,4,5	1
Porcupine R.S.	10C3	6500	10	4N	10E	1938	3,4	1
Timberline Creek	9D4	8850	10	8S	18E	1961	3,4,5	1
Sacajawea	10D10	6550	36	2S	6E	1960	3,4,5	1
West Rosebud	9D2	7500	10	7S	16E	1960	3,4	4
COLUMBIA RIVER BASIN								
FLATHEAD RIVER								
Desert Mountain	13A2M	5600	24	31N	19W	1956	Monthly	1
Marias Pass	13A5M	5250	34	30N	14W	1950	Monthly	1
CLARK FORK RIVER								
Georgetown Lake	13C19M	6450	6	5N	13W	1962	Monthly	1
Lubrecht Forest	13C14M	4100	11	13N	15W	1961	Monthly	8
BITTERROOT RIVER								
Gibbons Pass	13D18M	7100	4	2S	19W	1962	Monthly	1
MISSOURI RIVER BASIN								
BEAVERHEAD RIVER								
Lakeview	11E13M	6700	23	14S	2W	1962	Monthly	10
MADISON RIVER								
Red Bluff	11D4M	4800	7	3S	1E	1961	Monthly	7
GALLATIN RIVER								
College Site	11D2M	4856	18	2S	5E	1956	Monthly	1
YELLOWSTONE RIVER								
Battle Ridge	10D11M	6020	32	2N	7E	1960	Monthly	1
Northeast Entrance	10D13M	7350	33	9S	14E	1962	Monthly	6
Shields River	10C4M	5850	3	4N	10E	1960	Monthly	1

1/ Numerals 1,2,3,4,5,5½,6 refer to January 1, February 1, March 1, April 1, May 1, May 15 and June 1.

2/ Numerals refer to Agency that secures the snow survey as follows:

1. Soil Conservation Service
2. U. S. Forest Service
3. U. S. Geological Survey
4. Montana Power Company
5. U. S. Indian Service
6. National Park Service
7. Montana Experiment Station
8. Montana State Forestry School
9. Dominion Water & Power Bureau
10. U. S. Fish and Wildlife Service

M - Soil Moisture
A - Aerial Marker

WPA-BLK-LINCOLN, NEBR. 1943

WATER SUPPLY FORECASTS

AS OF MAY 1, 1963

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	COLUMBIA RIVER BASIN					
	KOOTENAI RIVER					
3030	Libby (at)	May-Sept	4900	70	5799	7053
		May-July	4100	68	4874	6024
3050	Leonia (at)	May-Sept	5460	68	6531	7994
		May-July	4600	67	5529	6903
	NORTH FORK FLATHEAD RIVER					
3555	Columbia Falls (near)	May-Sept	1250	72	1393	1749
		May-July	1135	72	1255	1576
		May-June	938	72	1072	1298
	MIDDLE FORK FLATHEAD RIVER					
3585	West Glacier (near)	May-Sept	1318	78	1415	1687
		May-July	1210	78	1296	1553
		May-June	1027	79	1116	1286
	SOUTH FORK FLATHEAD RIVER					
3625	Columbia Falls (nr)(17)	May-Sept	1750	87	1997	2015
		May-July	1652	87	1891	1897
		May-June	1401	87	1664	1617
	FLATHEAD RIVER					
3630	Columbia Falls (at)(17)	May-Sept	4431	79	4975	5608
		May-July	4127	80	4576	5155
		May-June	3440	80	3954	4302
3720	Polson (near)(18)	May-Sept	5220	79	5795	6605
		May-July	4850	80	5336	6081
		May-June	4035	80	4602	5039
	SWAN RIVER					
3700	Big Fork (near)	May-Sept	507	91	616	554
		May-July	436	91	537	479
		May-June	340	91	433	374
	BLACKFOOT RIVER					
3400	Bonner (near)	May-Sept	772	88	914	879
		May-July	687	88	816	783
		May-June	566	88	701	655
	FLINT CREEK					
3295	Maxville (at)	May-Sept	35.0	91	32.0	38.7
		May-July	25.0	91	20.6	27.6
	BOULDER CREEK					
3300	Maxville (at)	May-Sept	22.2	84	22.6	26.4
		May-July	20.1	84	20.5	24.0
	MIDDLE FORK ROCK CREEK					
3320	Philipsburg (near)	May-Sept	65.4	87		75.6
		May-July	58.9	87		67.6

(17) Corrected for storage in Hungry Horse Reservoir.
(18) Corrected for storage in Hungry Horse Reservoir and Flathead Lake.

*PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY

NOTE: ALL AVERAGES BASED ON 1943-1957 (15 YEAR PERIOD).

WATER SUPPLY FORECASTS

AS OF MAY 1, 1963

No.	River and reservoir point	Forecast period	Forecast	Probability Prob. Chance	Probability Average	Reservoir storage (1000 acre-feet) Last year	Reservoir storage (1000 acre-feet) Average
	COLUMBIA RIVER BASIN						
	ROOSEVELT RIVER						
3000	Alpine (ac)	May-Sept	4800	76	5750	7053	
		May-July	3100	88	4374	6023	
3010	Eureka (ac)	May-Sept	3400	68	5311	7204	
		May-July	1600	81	5547	6905	
	NORTH FORK FLATHEAD RIVER						
3055	Columbia Falls (acre)	May-Sept	1250	72	1403	1720	
		May-July	1135	74	1255	1470	
		May-June	910	76	1072	1294	
	MIDDLE FORK FLATHEAD RIVER						
3065	West Glacier (acre)	May-Sept	1334	78	1415	1615	
		May-July	1110	76	1246	1353	
		May-June	1027	74	1115	1254	
	SOUTH FORK FLATHEAD RIVER						
3065	Columbia Falls (ac)(1)(2)	May-Sept	1750	84	1000	2015	
		May-July	1652	82	1542	1827	
		May-June	1401	87	1[illegible]	1517	
	FLATHEAD RIVER						
3070	Columbia Falls (ac)(1)(2)	May-Sept	2431	79	2475	3198	
		May-July	2327	80	2[illegible]	2595	
		May-June	2140	80	2[illegible]	[illegible]	
3720	Polson (acre)(1)(2)	May-Sept	5320	90	5715	6805	
		May-July	4850	80	5230	6391	
		May-June	4035	83	4[illegible]	5039	
	SWAN RIVER						
3700	Big Fork (acre)	May-Sept	507	91	[illegible]	8[illegible]	
		May-July	4[illegible]	91	5[illegible]	6[illegible]	
		May-June	[illegible]	91	4[illegible]	[illegible]	
	BLACKFOOT RIVER						
3100	Bonner (acre)	May-Sept	772	88	8[illegible]	9[illegible]	
		May-July	687	88	8[illegible]	9[illegible]	
		May-June	5[illegible]	88	7[illegible]	8[illegible]	
	FLINT CREEK						
3200	Maxville (ac)	May-Sept	35.0	91	3[illegible]	3[illegible]	
		May-July	23.0	91	30.0	27.5	
	BOULDER CREEK						
3201	Maxville (ac)	May-Sept	27.2	84	22.6	25.[illegible]	
		May-July	20.1	81	20.5	2[illegible]	
	MIDDLE FORK ROCK CREEK						
3220	Philipsburg (acre)	May-Sept	6[illegible]	87	7[illegible]	7[illegible]	
		May-July	5[illegible]	87	[illegible]	6[illegible]	

(1) Corrected for storage in Hungry Horse Reservoir.
(2) Corrected for storage in Hungry Horse Reservoir and Flathead Lake.

* Probability that reservoirs be full, assuming normal inflow.

NOTE: All averages based on twenty-two year records.

WATER SUPPLY FORECASTS

AS OF MAY 1, 1963

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	CLARK FORK RIVER					
3404	Milltown (above)(14)	May-Sept	583	83	622	698
		May-July	500	83	520	600
		May-June	410	83	442	492
3405	Missoula (above)	May-Sept	1355	86	1536	1577
		May-July	1187	86	1336	1383
		May-June	976	85	1143	1147
3530	Missoula (below)	May-Sept	2244	76	2748	2950
		May-July	2017	76	2450	2648
		May-June	1671	76	2110	2200
3545	St. Regis (at)	May-Sept	2892	73	3613	3948
		May-July	2581	73	3210	3540
		May-June	2160	73	2762	2950
3890	Plains (near)(18)	May-Sept	8360	77	9829	10837
		May-July	7594	77	8902	9816
		May-June	6294	77	7647	8125
3920	Whitehorse Rapids (at)(19)	May-Sept	9280	77	10803	12144
		May-July	8378	77	9723	10975
		May-June	6970	77	8325	9027
	WEST FORK BITTERROOT RIVER					
3425	Conner (near)(15)	May-Sept	115	75	132	153
		May-July	106	75	120	141
	BITTERROOT RIVER					
3440	Darby (near)	May-Sept	365	70	452	519
		May-July	336	70	415	479
		May-June	287	70	363	409
3528	Missoula (near)(16)	May-Sept	889	65	1212	1379
		May-July	830	65	1114	1272
		May-June	695	65	967	1066
	BLODGETT CREEK					
3475	Corvallis (near)	May-Sept	38.0	91		41.9
		May-July	35.9	91		39.6

(14) Difference in observed flow, Clark Fork above Missoula & Blackfoot at Bonner.
(15) Corrected for storage in Painted Rocks Reservoir.
(16) Difference in observed flow, Clark Fork above and below Missoula.
(18) Corrected for storage in Hungry Horse Reservoir and Flathead Lake.
(19) Corrected for storage in Hungry Horse, Flathead Lake and Noxon Reservoirs.

*PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY

NOTE: ALL AVERAGES BASED ON 1943-1957 (15 YEAR PERIOD).

WATER SUPPLY FORECASTS

AS OF MAY 1, 1962

(Data in cfs)

No.	River and forecast point	Forecast period	Forecast (Thousands of acre-feet)	Percent of normal	Reservoir storage (Thousands of acre-feet)	
					Last year*	Average
	CLARK FORK RIVER					
3405	Militown (above)(14)	May-Sept	585	83	622	694
		May-July	334	83	520	600
		May-June	410	87	442	472
3405	Missoula (above)	May-Sept	1285	85	1230	1277
		May-July	1147	84	1136	1343
		May-June	906	85	1143	1147
3530	Missoula (below)	May-Sept	2624	76	2740	2945
		May-July	2017	76	2450	2642
		May-June	1671	76	2110	2220
3545	St. Regis (at)	May-Sept	2202	72	3013	3048
		May-July	2541	72	3210	3540
		May-June	2160	73	2762	2930
3620	Plains (near)(15)	May-Sept	4360	77	9229	10277
		May-July	7594	77	8902	9836
		May-June	6204	77	7417	8145
3720	Whitehorse Rapids (at)(16)	May-Sept	9260	77	10903	12144
		May-July	8392	77	9723	10995
		May-June	6970	77	8325	9027
	WEST FORK BITTERROOT RIVER					
3425	Conner (near)(17)	May-Sept	115	75	132	153
		May-July	105	75	120	141
	BITTERROOT RIVER					
3410	Darby (near)	May-Sept	365	70	452	521
		May-July	325	70	415	479
		May-June	287	70	363	409
3525	Hieroglyph (near)(18)	May-Sept	895	65	1212	1379
		May-July	830	65	1114	1272
		May-June	697	65	957	1064
	BLACKFOOT RIVER					
3475	Ferrenlik (near)	May-Sept	53.0	91		41.9
		May-July	35.9	92		39.5

(14) Difference in observed flow, Clark Fork above Missoula & Blackfoot at Bonner.
(15) Corrected for storage in Painted Rocks Reservoir.
(16) Difference in observed flow, Clark Fork above and below Missoula.
(18) Corrected for storage in Hungry Horse Reservoir and Flathead Lake.
(19) Corrected for storage in Hungry Horse, Flathead Lake and Noxon Reservoirs.

*Provisional data furnished by Bd. Reclamation Survey.

NOTE: All forecasts water on 1961-1962 1ss year period.

WATER SUPPLY FORECASTS

AS OF MAY 1, 1963

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	MISSOURI RIVER BASIN					
	RED ROCK RIVER					
0110	Kennedy Ranch (at)	May-Sept	30.6	56	68.5	54.5
		May-July	27.3	56	59.5	48.7
0125	Monida (near)(1)	May-Sept	33.1	53	70.8	62.3
		May-July	30.9	53	62.4	58.1
	BIG HOLE RIVER					
0255	Melrose (near)	May-Sept	570	85	549	668
		May-July	521	85	497	611
	BOULDER RIVER					
0330	Boulder (near)	May-Sept	63.8	92	55.6	69.4
		May-July	61.6	93	51.9	66.0
	JEFFERSON RIVER					
0345	Sappington (at)	May-Sept	709	78	782	913
		May-July	622	78	658	798
	MADISON RIVER					
0375	West Yellowstone (near)	May-Sept	144	77	196	187
		May-July	105	77	144	136
0385	Grayling (near)(2)	May-Sept	275	71	420	389
		May-July	212	71	310	298
0410	McAllister (near)(3)	May-Sept	496	75	710	659
		May-July	388	75	557	516
	GALLATIN RIVER					
0435	Gateway (near)	May-Sept	407	94	523	431
		May-July	342	93	443	367
	HYALITE CREEK					
0500	Hyalite R. S. (at)(4)	May-Sept	35.5	107	34.9	33.2
		May-July	30.2	107	28.8	28.2
	GALLATIN RIVER					
0525	Logan (at)	May-Sept	380	89	518	426
		May-July	318	89	426	356

(1) Corrected for storage in Lima Reservoir.
(2) Corrected for storage in Hebgen Lake.
(3) Corrected for storage in Hebgen and Ennis Lakes.
(4) Corrected for storage in Middle Creek Reservoir.

*PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY

NOTE: ALL AVERAGES BASED ON 1943-1957 (15 YEAR PERIOD).

WATER SUPPLY FORECASTS

AS OF MAY 1, 1963

(Upper Half Year)

No.	River and Forecast Point	Forecast Period	Forecast Runoff (Thousand Acre-Feet)	Average Runoff (Thousand Acre-Feet)	Percent Average	Reservoir Storage (Thousand Acre-Feet)	
						Last Year*	Average
	MISSOURI RIVER BASIN						
	RED ROCK RIVER						
0110	Hebgen Reach (est)	May-Sept	30.6	96	68.5	34.5	
		May-July	27.1	88	59.5	48.7	
0125	Wisdom (near)(1)	May-Sept	33.6	53	70.8	63.4	
		May-July	30.9	53	62.4	58.1	
	BIG HORN RIVER						
0255	Tullock (near)	May-Sept	570	85	340	604	
		May-July	522	85	497	811	
	BOULDER RIVER						
0330	Boulder (near)	May-Sept	63.8	94	55.6	60.4	
		May-July	61.6	93	51.3	58.0	
	JEFFERSON RIVER						
0340	Sappington (est)	May-Sept	706	76	732	923	
		May-July	629	72	629	872	
	MADISON RIVER						
0375	West Yellowstone (near)	May-Sept	[illegible]	77	196	187	
		May-July	106	77	[illegible]	[illegible]	
0385	Greycliff (near)(2)	May-Sept	275	71	430	395	
		May-July	232	71	320	448	
0410	Montana (near)(3)	May-Sept	496	75	710	649	
		May-July	384	75	577	518	
	GALLATIN RIVER						
0435	Gallatin (near)	May-Sept	407	94	320	434	
		May-July	342	93	342	367	
	MISSOURI RIVER						
0500	Toston L. S. (at)(4)	May-Sept	35.5	107	24.9	33.4	
		May-July	30.2	107	23.8	28.2	
	GALLATIN RIVER						
0545	Logan (at)	May-Sept	380	89	514	426	
		May-July	318	89	424	356	

(1) Corrected for storage in Lima Reservoir.
(2) Corrected for storage in Hebgen Lake.
(3) Corrected for storage in Hebgen and Quake Lakes.
(4) Corrected for storage in Middle Creek Reservoir.

*Preliminary data subject to revision by U.S. Geological Survey

NOTE: All average data are based on the period 1931 thru 1960.

WATER SUPPLY FORECASTS

AS OF MAY 1, 1963

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	MISSOURI RIVER					
0545	Toston (at)(3)	May-Sept	1564	78	1924	2006
		May-July	1324	78	1582	1693
0908	Fort Benton (at)(5)	May-Sept	2306	74	2888	3098
		May-July	1910	74	2323	2575
1095	Virgelle (at)(6)	May-Sept	2690	71	3158	3799
		May-July	2285	71	2586	3209
1150	Zortman (near)(6)	May-Sept	2960	71	3631	4140
		May-July	2480	71	2998	3477
1320	Fort Peck Dam (below)(7)	May-Sept	2708	67		4027
		May-July	2314	67		3446
1770	Wolf Point (near)(7)	May-Sept	2840	67	4297	4256
		May-July	2430	67	3767	3647
3300	Williston, N. D. (nr)(8)	May-Sept	8050	76	11564	10565
		May-July	6870	75	10024	9144
	PRICKLY PEAR CREEK					
0615	Clancy (near)	May-Sept	17.0	82	20.1	20.7
		May-July	14.5	82	17.1	17.6
	NORTH FORK SUN RIVER					
0785	Augusta (near)	May-Sept	173	77	201	225
		May-July	159	77	184	207
	SUN RIVER					
0786	Gibson Dam (at)(10)	May-Sept	411	75	554	551
		May-July	377	75	508	501
	MARIAS RIVER					
0995	Shelby (near)	May-Sept	335	58	332	581
		May-July	303	58	304	527
	SOUTH FORK MUSSELSHELL R.					
1185	Martinsdale (above)	May-Sept	45.5	98	44.3	46.3
		May-July	43.2	98	40.5	44.2
	MILK RIVER					
1350	Eastern Crossing (at)	May-Sept	144	74	171	195

(3) Corrected for storage in Hebgen and Ennis Lakes.
(5) Corrected for storage in Canyon Ferry Reservoir.
(6) Corrected for storage in Canyon Ferry and Tiber Reservoirs.
(7) Corrected for storage in Canyon Ferry, Tiber and Fort Peck Reservoirs.
(8) Corrected for storage in Canyon Ferry, Tiber, Fort Peck, Buffalo Bill and Boysen Reservoirs.
(10) Corrected for storage in Gibson Reservoir and diversions.

*PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY

NOTE: ALL AVERAGES BASED ON 1943-1957 (15 YEAR PERIOD).

No.	River and forecast point	Forecast period	Forecast runoff (1000 acre-feet)	Normal runoff (1000 acre-feet)	Observed flow (1000 acre-feet)	% of normal
	MISSOURI RIVER					
0543	Toston (ak)(3)	May-Sept	1064	78	1924	2465
		May-July	1324	75	1595	1693
0608	Fort Benton (ak)(3)	May-Sept	2304	74	2488	3178
		May-July	1910	74	2323	2577
1095	Wolsgalle (ak)(5)	May-Sept	2240	71	3158	3748
		May-July	2030	71	2435	2397
1150	Sherman (dam)(6)	May-Sept	2950	72	3431	4140
		May-July	2160	70	2295	3177
1320	Fort Peck Dam (below)(7)	May-Sept	2304	67		4127
		May-July	2314	69		3646
1710	Wolf Point (dam)(17)	May-Sept	2410	67	4277	4256
		May-July	2120	67	3437	3847
1900	Williston, N. D. (ak)(8)	May-Sept	4520	78	4,454	5,255
		May-July	4070	75	3,034	3,464
	YELLOWSTONE RIVER					
0615	Glendive (dam)	May-Sept	17.0	82	21.1	23.7
		May-July	14.5	82	17.1	17.8
	NORTH FORK, SOUTH RIVER					
0745	Anaconda (dam)	May-Sept	173	77	201	225
		May-July	139	77	164	177
	BIG HORN					
0945	Dixon Dam (ak)(10)	May-Sept	412	75	534	531
		May-July	377	77	506	501
	MADISON RIVER					
0995	Shelby (dam)	May-Sept	335	79	338	401
		May-July	303	79	304	327
	SOUTH FORK MISSOURI RIVER					
1135	Portageville (above)	May-Sept	45.5	82	44.3	46.3
		May-July	41.2	82	40.5	44.2
	MILK RIVER					
1350	Nashua Crossing (ak)	May-Sept	142	74	172	197

(4) Corrected for storage in Hebgen and Quake Lakes.
(5) Corrected for storage in Canyon Ferry Reservoir.
(6) Corrected for storage in Gordon Butte and Ninepipe Reservoirs.
(7) Corrected for storage in Canyon Ferry, Tiber and Fort Peck Reservoirs.
(8) Corrected for storage in Canyon Ferry, Tiber, Fort Peck, Buffalo Rill and Boysen Reservoirs.
(10) Corrected for storage in Bighorn Reservoir and diversions.

WATER SUPPLY FORECASTS

AS OF MAY 1, 1963

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	YELLOWSTONE RIVER					
1915	Corwin Springs (at)	May-Sept	1480	79	2119	1888
		May-July	1228	79	1757	1557
1925	Livingston (near)	May-Sept	1676	79	2386	2136
		May-July	1378	79	1973	1747
2145	Billings (at)	May-Sept	3033	76	4218	3998
		May-July	2563	76	3494	3393
3090	Miles City (at)(12)	May-Sept	4874	79	6441	6182
		May-July	4206	79	5497	5343
3295	Sidney (near)(12)	May-Sept	5080	80	7384	6362
		May-July	4340	80	6449	5430
	SHIELDS RIVER					
1935	Clyde Park (at)	May-Sept	83.8	90	65.1	92.5
		May-July	76.7	90	56.6	84.8
	STILLWATER RIVER					
2050	Absarokee (near)(11)	May-Sept	505	85	607	594
		May-July	422	85	488	497
	CLARKS FORK RIVER					
2075	Chance (at)	May-Sept	450	76	573	590
		May-July	400	76	510	525
2085	Edgar (at)	May-Sept	466	76	625	616
		May-July	412	76	532	540
	ROCK CREEK					
2095	Red Lodge (near)	May-Sept	96.0	88	103	109
		May-July	73.6	88	79.1	83.6

(11) Corrected for storage in Mystic Lake.
(12) Corrected for storage in Buffalo Bill and Boysen Reservoirs.

*PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY

NOTE: ALL AVERAGES BASED ON 1943-1957 (15 YEAR PERIOD).

WATER SUPPLY FORECASTS

AS OF MAY 1, 1969

No.	River and forecast point	Forecast period	Forecast (1000 acre-feet)	Median (most probable)	Reservoir storage (1000 acre-feet)	
					Last year*	Average
	YELLOWSTONE RIVER					
1915	Corwin Springs (at)	May-Sept	1,460	75	2,139	1,838
		May-July	1,222	75	1,977	1,637
1925	Livingston (above)	May-Sept	1,670	70	2,276	2,148
		May-July	1,375	70	1,973	1,747
2145	Billings (at)	May-Sept	3,273	70	4,218	3,903
		May-July	2,783	70	3,704	3,329
2240	Miles City (at)(1a)	May-Sept	4,974	70	6,481	6,182
		May-July	4,200	70	5,477	5,143
1055	Sidney (above)(1a)	May-Sept	5,090	80	7,344	6,163
		May-July	4,340	80	6,449	5,430
	SIOUX RIVER					
1930	Tipton (at)	May-Sept	83.8	70	65.4	78.5
		May-July	76.7	60	57.5	64.8
	STILLWATER RIVER					
2030	Absarokee (near)(1a)	May-Sept	305	85	267	344
		May-July	232	85	4[illegible]	297
	CLARKS FORK RIVER					
2075	Clarks (at)	May-Sept	1,450	70	573	590
		May-July	1,180	70	512	522
2085	Edgar (at)	May-Sept	156	70	625	616
		May-July	112	70	512	540
	ROCK CREEK					
2095	Red Lodge (near)	May-Sept	90.0	85	103	109
		May-July	73.6	85	74.1	85.6

(1a) Corrected for storage in Bighorn Lake.
(1b) Corrected for storage in Buffalo Bill and Boysen Reservoirs.

*Contingent upon changes at U.S. production center.

NOTE: All storage data is for conditions at area reservoirs.

SOIL MOISTURE DATA

AS OF MAY 1, 1963

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
			COLUMBIA RIVER BASIN					
Flathead								
13A2M	Desert Mountain	5600	54	8.4	5/2	8.9	8.9	8.3
13A5M	Marias Pass	5250	54	6.5	4/28	6.2	6.1	6.0
Clark Fork								
13C15M	Georgetown Lake	6450	48	8.3	5/1	4.1	8.2	-
Bitterroot								
13D18M	Gibbons Pass	7100	48	7.1	5/1	7.0	-	-
			MISSOURI RIVER BASIN					
Beaverhead								
11E13M	Lakeview	6700	48	15.3	4/30	14.4	-	-
Madison								
10D4M	Red Bluff	4800	40	4.7	5/5	2.4	2.0	-
Gallatin								
11D2M	College Site	4856	54	14.5	4/30	13.4	11.9	11.9
Yellowstone								
10D11M	Battle Ridge	6020	48	15.4	4/30	17.2	14.6	-
10D13M	Northeast Entrance	7350	48	9.4	4/30	7.5	-	-
10C4M	Shields River	5850	48	17.8 1/	4/30	17.1	18.2	-

1/ Capacity and previously published revised data.

**AVERAGE FOR PERIOD OF RECORD

SOIL MOISTURE DATA

AS OF MAY 1, 1961

(Inches)

Soil Moisture Station			Soil Moisture			Snow Course Data		Snow Records	
No.	Name	Elevation	Depth	Water Capacity 1/	Last Date of Survey	Soil Moisture	Last Year	**Average	
	COLUMBIA RIVER BASIN								
Canadian									
1A2M	Dewey Mountain	5600	54	8.4	5/2	8.0	8.9	8.3	
1B4M	Marias Pass	5250	54	6.5	4/24	5.2	6.1	6.0	
Clark Fork									
1C01M	Georgetown Lake	6450	42	6.3	5/1	4.1	8.2	-	
Blackfoot									
1D10M	Gibbons Pass	7100	42	7.1	5/1	7.0	-	-	
	MISSOURI RIVER BASIN								
Beaverhead									
1E13M	Lakeview	6700	48	15.3	4/30	14.4	-	-	
Madison									
1G04M	Red Bluff	4800	40	3.7	5/5	2.4	2.0	-	
Gallatin									
1H02M	Gallatin Site	4850	54	14.5	4/30	13.4	11.9	11.9	
Yellowstone									
1D01M	Battle Ridge	6050	42	15.4	4/30	17.2	14.6	-	
1D03M	Northeast Entrance	7350	42	8.4	4/30	7.5	-	-	
1D04M	Sylvan Pass	5850	42	17.8 1/	4/30	17.1	18.2	-	

1/ Capacity and previously published revised data.

**Average for period of record.

SNOW SURVEY DATA

AS OF MAY 1, 1963

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
	COLUMBIA RIVER BASIN						
KOOTENAI RIVER							
15B11	Baree Creek	5500	5/1	72	31.4	41.8	48.2*
14A4	Brush Creek	5000	4/26	21	8.2	8.4	10.5*
Can 10	Fernie	3500	5/2	0	0.0	0.0	2.7*
Can 12A	Field	4200	4/29	0	0.0	0.0	0.8*
Can 43	Gray Creek	5100	4/28	46	15.7	17.5	20.4*
Can 33	Kicking Horse	5400	4/30	33	11.3	11.1	11.8*
Can 20B	Kimberley	3800				0.0	1.5*
Can 32	Marble Canyon	5000	5/1	27	7.9	9.0	13.5*
Can 10B	Morrissey Ridge	6100	5/2	62	26.1	23.6	-
Can 10A	New Fernie	4100	5/2	3	0.7	3.9	6.7*
15A1	Red Mountain	6000	4/30	40	14.2	14.4	19.7
Can 8A	Sinclair Pass	4500	5/1	0	0.0	0.0	2.1*
Can 20A	Sullivan Mine	5100	4/30	24	8.2	9.2	11.9*
Can 41	Upper Elk River	4400	4/30	0	0.0	0.0	2.2*
14A7	Weasel Divide	5450	5/1	63	26.4	30.5	34.7*
FLATHEAD RIVER							
13B14A	Basin Creek	5000	4/24	0	0.0	0.0	1.8*
14B3	Bassoo Peak	5150	4/29	10	3.7	5.2	-
13B3	Big Creek	6750	5/2	108	47.9	49.0	48.4*
13A17	Camp Misery	6400	4/30	96	40.5	44.6	-
13A2	Desert Mountain	5600	5/2	25	9.2	12.2	13.0
13B4	Fatty Creek	5500	5/2	46	18.4	18.6	-
14A9	Griffin Creek Divide	5150	5/1	12	4.4	5.1	-
14A3	Hell Roaring Divide	5770	4/29	60	25.2	28.1	28.7
13B13A	Holbrook	4530	4/24	0	0.0	0.0	1.2*
14A5	Logan Creek	4300	4/26	7	2.4	2.0	2.7*
13A5	Marias Pass	5250	4/29	25	9.7	14.7	15.7
13B7	North Fork Jocko	6330	5/3	92	39.2	48.8	44.7*
13B2	Spotted Bear Mountain	7000	4/24	21	7.6	7.6	12.6*
13A10	Strawberry Lake	6500	4/24	70	27.2	34.0	40.0*
13B1	Trinkus Lake	6500	4/24	87	33.7	43.6	41.4*
13A12	Trout Lake	3600	5/3	0	0.0	3.5	8.2*
13B11	Twin Creeks	3580	5/3	0	0.0	0.0	0.8*
13B5	Upper Holland Lake	7000	4/24	74	28.0	37.8	36.8*

NOTE: ALL AVERAGES BASED ON 1943-1957 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF MAY 1, 1963

Snow Survey			Current Data			Last Record		
No.	Name	Elevation	Date of Survey	Snow Depth	Water Content	Water Content Last Year	Water Content Average	
	COLUMBIA RIVER BASIN							
	KOOTENAI RIVER							
12B11	Bates Creek	5500	5/1	72	31.4	41.8	49.2*
12A4	Brass Creek	5000	4/25	21	8.2	8.1	10.5*
Can 12	Fernie	3500	3/2	0	0.0	0.0	2.7*
Can 12A	Field	4200	4/29	0	0.0	0.0	0.8*
Can 43	Grey Creek	3200	4/28	46	15.7	17.5	20.4*
Can 33	Elkring Mtn	3400	4/30	32	11.3	11.5	11.4*
Can 20B	Kimberley	3800				0.0	1.5*
Can 32	Marysville Canyon	2000	3/1	27	7.0	9.0	13.3*
Can 10B	Morrissey Bridge	3100	3/2	42	26.1	23.6	-
Can 10A	New Fernie	4200	3/2	3	0.7	3.0	4.7*
12A1	Red Mountain	6000	4/30	40	14.2	14.4	19.7
Can 8A	Simpson Pass	4300	3/1	0	0.0	0.0	2.1*
Can 20A	Sullivan Mine	3700	4/30	24	8.2	9.2	11.9*
Can 41	Upper Elk River	4200	4/30	0	0.0	0.0	2.8*
12A7	Wasnai Divide	3410	3/1	43	24.4	30.3	34.7*
	FLATHEAD RIVER						
12B12A	Basin Creek	3000	4/24	0	0.0	0.0	1.8*
12A2	Beaver Pass	3350	4/29	10	3.7	3.2	-
12B4	Big Creek	6770	3/2	104	47.9	49.0	48.4*
12A17	Carp Mintry	6000	4/30	96	40.5	44.6	-
12A2	Desert Mountain	5700	3/2	24	9.2	12.2	13.0
12B4	Fatty Creek	3500	3/2	45	18.4	18.6	-
12A9	Griffin Creek Divide	3150	3/1	12	4.4	3.1	-
12A3	Hell Roaring Divide	3770	4/29	60	25.2	22.1	26.7
12B12A	Kishook	4430	4/24	0	0.0	0.0	1.2*
12A5	Logan Creek	4000	4/30	7	2.4	2.0	2.7*
12A8	Marias Pass	3250	4/29	25	9.7	12.7	15.7
12B7	North Fork Joeb	6430	3/3	92	39.2	48.4	44.7*
12B2	Spotted Bear Mountain	7000	4/24	21	7.8	7.6	12.6*
12A10	Strawberry Lake	6500	4/24	70	27.2	34.0	40.0*
12B1	Trinkus Lake	6800	4/24	87	39.7	43.6	41.4*
12A12	Trout Lake	3600	3/3	0	0.0	3.5	8.7*
12B12	Twin Creek	3980	3/3	0	0.0	0.0	0.8*
12B5	Upper Holland Lake	7200	4/24	74	28.0	37.8	36.8*

NOTE: All averages based on 1949-1962 inclusive previous. *Adjusted average

SNOW SURVEY DATA

AS OF MAY 1, 1963

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
CLARK FORK RIVER							
13C13	Black Pine	7100	4/30	37	14.4	9.0	-
13B10	Coyote Hill	4200	5/2	0	0.0	3.2	2.1*
13C11	Fred Burr Pass	8000	4/29	74	29.8	22.6	-
15C1	Hoodoo Creek	6200	4/30	83	35.5	44.5	46.9*
13C4	Intergaard	6450	4/29	25	8.1	-	-
15B2	Lookout	5250	4/29	62	25.2	30.8	34.0*
13C8	Lubrecht Forest #6	4040	5/1	0	0.0	0.0	0.1*
13C12	Red Lion	7000	4/29	54	20.2	13.8	-
13C3	Skalkaho Summit	7259	4/30	63	25.0	24.7	25.8*
13C2	Slide Rock Mountain	7100	5/1	44	16.6	13.1	14.0*
13C7	Storm Lake	7780	4/29	48	17.3	11.2	16.3*
13C1	Stuart Mountain	7400	4/27	73	31.4	30.0	30.1*
14B1	T. V. Mountain	6800	4/28	47	19.4	17.8	21.0*
BITTERROOT RIVER							
13C16	Ambrose	6475	4/29	33	12.9	9.0	-
13D2	Gibbons Pass	7100	5/1	56	20.0	16.2	23.0
14C5	Lolo Pass	5230	4/29	45	19.6	33.7	29.7*
14C7	Lost Horse	5940	4/26	61	23.8	29.8	-
14D2	Nez Perce Camp	5580	5/1	24	7.8	5.6	8.3*
14D1	Nez Perce Pass	6575	5/1	30	9.6	6.8	12.6
14C8	Twin Lakes	6510	4/26	88	36.6	43.7	-

NOTE: ALL AVERAGES BASED ON 1943-1957 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF MAY 1, 1951

Item Course			Current Data			Prior Records	
No.	Name	Elevation	Date of Survey	Depth Water	Water Content	Water Content	
						Last Year	Average
BLACK FOOT RIVER							
12013	Black Pine	7100	4/30	37	14.4	9.0	-
12810	Cooper Hill	4700	5/2	0	0.0	3.8	2.1*
12011	First Burr Pass	8030	4/29	74	29.9	22.6	-
1901	Pendro Creek	6200	4/30	83	35.4	44.5	46.9*
1304	Interpsarci	8450	4/29	25	8.1	-	-
1382	Lancaster	5250	4/29	62	25.5	30.8	34.0*
1308	Lawrence Forest #5	4400	5/1	0	0.0	0.0	0.1*
13012	Red Lion	7000	4/29	54	20.2	13.8	-
1301	Skalkaho Summit	7450	4/30	63	25.0	24.7	26.6*
1302	Silver Rock Mountain	7100	5/1	44	16.0	13.1	14.0*
1307	Stone Lake	7750	4/29	48	17.3	11.2	16.2*
1301	Stuart Mountain	7450	4/27	73	34.4	30.0	30.1*
1401	T. V. Mountain	6800	4/28	47	19.4	17.8	21.0*
BITTERROOT RIVER							
13015	Andover	6475	4/29	33	12.9	9.0	-
1302	Gibbons Pass	7100	5/1	56	20.0	16.2	23.0
1405	Lolo Pass	5230	4/29	44	18.6	35.7	29.7*
1407	Lost Horse	5940	4/26	81	23.8	23.8	-
1402	Nez Perce Camp	5580	5/1	24	7.8	5.6	8.3*
1401	Nez Perce Pass	6575	5/1	30	9.6	6.8	12.6
1408	Twin Lakes	6510	4/26	88	26.6	43.7	-

NOTE: All averages based on 1943-1951 (15 year period). *Insufficient record

SNOW SURVEY DATA

AS OF MAY 1, 1963

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
	MISSOURI RIVER BASIN						
BEAVERHEAD RIVER							
11E4	Lakeview Canyon	6930	4/26	27	8.4	9.6	9.6*
11E3	Lakeview Ridge	7400	4/26	24	7.4	6.4	7.6*
12E1	White Pine Ridge	8850	4/25	25	7.8	-	-
RUBY RIVER							
11D8	Clover Meadow	8600	4/25	52	15.4	-	-
12E7	Divide	7900	4/25	31	9.3	-	-
12E6	Notch	8500	4/25	46	13.5	-	-
BIG HOLE RIVER							
13D20	Abundance Lake	8800	4/25	66	19.8	-	-
13D19	Darkhorse Lake	8600	4/25	74	22.5	-	-
13D15	Elkhorn Springs	7800	4/29	30	8.0	5.5	8.7*
13D21	Foolhen	8500	4/25	61	17.7	-	-
JEFFERSON RIVER							
12D1	Pipestone Pass	7200	5/1	23	6.4	1.1	3.9*
MADISON RIVER							
11E9	Big Springs	6500	4/29	29	10.5	-	-
11D7	Call Road	8050	4/25	42	12.5	-	-
11D6	Crockett Lake	8400	4/25	41	13.2	-	-
11E5	Hebgen Dam	6550	4/29	15	5.1	2.4	3.9
11E10	Island Park	6315	4/29	23	8.1	-	-
10E2	Norris Basin	7500	4/29	31	10.9	5.2	6.3*
11E8	Valley View	6500	4/29	34	11.3	-	-
11E7	West Yellowstone	6700	4/29	12	4.6	5.0	5.6
GALLATIN RIVER							
11D9	Bear Basin	8150	5/2	53	20.8	-	-
10D4	Devil's Slide	8100	4/27	66	25.2	25.0	23.4
10D3	Hood Meadow	6600	4/27	25	9.3	4.8	5.5
11D10	Little Park	7400	5/2	37	13.6	-	-
11E6	Twenty-One Mile	7150	4/28	34	11.2	11.4	14.5

NOTE: ALL AVERAGES BASED ON 1943-1957 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF MAY 1, 1963

SNOW COURSE			CURRENT DATA			PAST RECORD		
No.	Name	Elevation	Date of Survey	Snow Depth	Water Content	Water Content	Last Year	Average

MISSOURI RIVER BASIN

BEAVERHEAD RIVER

1124	Lakeview Canyon	6930	4/26	27	8.1	9.6	9.6*
1129	Lakeview Ridge	7400	4/26	24	7.4	6.4	7.6*
1221	White Pine Ridge	8850	4/25	25	7.6	-	-

RUBY RIVER

1106	Clover Meadow	8500	4/25	32	15.4	-	-
1227	Dillon	7400	4/25	21	9.3	-	-
1230	Moton	8500	4/25	46	13.3	-	-

BIG HOLE RIVER

1302C	Admiralty Lake	5500	4/25	66	19.8	-	-
1301P	Berkshire Lake	8500	4/25	74	22.4	-	-
1301S	Elkhorn Springs	7850	4/29	30	8.0	5.5	6.7*
1302I	Fostine	8500	4/25	61	17.7	-	-

JEFFERSON RIVER

1201	Pipestone Pass	7200	5/1	23	6.4	1.1	3.0*

MADISON RIVER

1189	Big Springs	6500	4/29	29	13.5	-	-
1187	Cell Road	8050	4/25	42	12.5	-	-
1186	Cascade Lake	8400	4/25	41	13.2	-	-
1185	Hebgen Dam	6850	4/29	15	5.7	2.4	3.9
1181C	Island Park	6315	4/29	23	5.1	-	-
1082	Mccrite Basin	7500	4/29	31	10.9	5.2	6.3*
1188	Valley View	6500	4/29	24	12.7	-	-
1187	West Yellowstone	6700	4/29	12	4.6	5.0	5.6

GALLATIN RIVER

1109	Bear Basin	8150	5/2	53	20.8	-	-
1074	Devil's Slide	8100	4/27	66	25.2	25.0	23.4
1083	Food Meadow	6600	4/27	25	9.3	4.8	5.5
1110	Little Park	7200	5/2	37	13.6	-	-
1185	Twenty-One Mile	7150	4/29	34	11.2	11.4	14.5

NOTE: ALL AVERAGES BASED ON 1955-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF MAY 1, 1963

(inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
MISSOURI RIVER (Main Stem)							
12C5	Chessman Reservoir	6200	4/26	5	1.8	0.0	2.6
10C1	Kings Hill	7500	4/29	35	10.4	10.9	14.1*
12C1	Stemple Pass	6900	4/29	26	8.1	7.3	8.7
12C2	Tenmile, Lower	6250	4/26	20	5.9	0.8	3.6
12C3	Tenmile, Middle	6800	4/25	43	13.1	6.6	9.0
12C4	Tenmile, Upper	8000	4/25	54	17.2	10.7	12.7
SUN-TETON-MARIAS RIVERS							
12B7	Goat Mountain	7000	4/30	19	6.0	9.3	9.2*
SASKATCHEWAN RIVER							
13A3	Iceberg Lake #3	5600	5/1	54	23.6	22.8	27.1
13A14	Josephine Lower #9	4900	4/30	23	8.8	15.2	17.1*
13A7	Mount Allen #7	5700	4/30	84	34.8	40.4	47.3
13A6	Piegan Pass #6	5500	4/30	66	28.4	34.7	38.4
13A8	Ptarmigan #8	5800	5/1	72	27.6	30.7	37.8
UPPER YELLOWSTONE RIVER							
9D1	Camp Senia	7890	4/29	39	11.0	8.3	-
10E3	Canyon	7750	5/1	41	14.5	15.5	12.6*
10E6	East Entrance	7000	4/30	22	7.2	0.0	4.9*
9D3	Gertrude Lake	9250	4/29	66	16.8	16.4	-
9D5	Grizzly Peak	8400	5/1	63	21.9	25.8	-
10D6	Independence	8000	4/30	50	17.6	15.2	-
10E4	Lake Camp #2	7850	4/30	22	5.5	9.9	8.7*
9E1	Lodgepole	8200	5/1	39	11.0	7.2	11.0*
10E1	Lupine Creek	7300	4/27	24	8.7	6.2	8.6*
10D12	Monument Peak	9000	4/30	70	25.0	26.0	-
10D7	Northeast Entrance (Cooke City)	7400	4/30	22	7.2	3.8	6.6*
10D10	Sacajawea	6550	5/3	27	10.6	6.0	-
10E5	Sylvan Pass	7100	4/30	41	12.6	2.5	10.7*
9D4	Timberline Creek	8850	4/29	67	16.6	17.1	-

NOTE: ALL AVERAGES BASED ON 1943-1957 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF MAY 1, 1963

SNOW COURSE			COURTESY DATA			PAST RECORD	
No.	Name	Elevation	Date of Survey	Depth Snow	Water Content	Water Content	Last Year % Average
MISSOURI RIVER (MAIN STEM)							
1204	Chamberlain Reservoir	6200	4/26	5	1.8	0.0	2.6
1201	Alings Hill	7500	4/29	25	12.4	10.5	14.1*
1203	Stanley Ford	5200	4/29	28	8.1	7.3	5.7
1202	Tenmile Lodge	6250	4/26	20	5.9	0.0	3.6
1201	Tenmile, Middle	5800	4/25	43	13.1	6.6	9.0
1201	Tenmile, Upper	8000	4/25	54	17.2	10.7	12.7
SOUTH-DAKOTA-MONTANA RIVERS							
1237	Dead Mountain	7000	4/30	19	6.0	9.3	9.2*
BIG-HORN-WIND RIVER							
1243	Tensleep Lake 4%	5800	5/1	51	23.4	22.6	27.1
1241A	Josephine Lower 4%	4250	4/30	23	8.0	14.2	17.1*
1247	Mount Allen 4%	3700	4/30	64	34.9	40.4	47.3
1246	Pilgan Park 4%	5500	4/30	50	26.4	34.7	34.4
1248	Fortetgan 4%	5800	5/1	72	27.5	30.7	37.8
LITTLE VIRGIN-STONES RIVER							
9101	Camp Creek	7500	4/29	39	11.0	9.3	-
1003	Canyon	7750	5/1	11	14.5	13.7	12.0*
1000	East Entrance	7000	4/30	21	7.2	0.0	4.9*
9103	Horsethief Lake	6250	4/29	64	16.2	16.4	-
9104	Grizzly Park	6400	5/1	63	21.9	25.6	-
1005	Independence	8000	4/30	50	27.6	15.2	-
1001	Lake Cast 3%	7550	4/30	42	5.5	9.9	8.7*
9101	Kolob-Grotto	5250	5/1	58	11.0	7.8	11.0*
1001	Lupine Creek	7250	4/27	24	8.7	6.2	8.6*
1002	Monument Park	7000	4/30	70	25.0	26.0	-
9107	Northeast Entrance (Cedar Grove)	7400	4/30	22	7.2	3.8	6.6*
1002A	Snowflower	6550	5/3	27	10.8	6.0	-
1003	Sylvan Pass	7100	4/30	41	12.6	2.5	10.7*
9102	Timberline Creek	8850	4/29	67	16.0	17.1	-

NOTE: ALL AVERAGES BASED ON 1941-1960 ICE YEAR RECORDS. "RAVALYSER" ANALYSIS

RESERVOIR STORAGE DATA

AS OF APRIL 30, 1963

(1000 Acre Feet)

BASIN	RESERVOIR	USEABLE CAPACITY	USEABLE STORAGE THIS YEAR	USEABLE STORAGE LAST YEAR	USEABLE STORAGE AVERAGE
COLUMBIA RIVER BASIN					
Flathead	Hungry Horse	3,428.0	2,535.0	2,321.0	2,048.0**
	Flathead Lake	1,791.0	966.5	1,119.0	936.0
	Camas 1/	45.2	33.2	34.2	30.6
	Mission Valley 2/	100.3	38.2	41.2	46.8
Clark Fork	Georgetown Lake	31.0	24.0	20.9	21.2
	Noxon	334.6	117.8	132.2	-
Bitterroot	Como	34.9	27.8	24.0	16.5
MISSOURI RIVER BASIN					
Beaverhead	Lima	84.0	44.5	53.3	55.9
Ruby	Ruby	38.8	32.4	38.8	27.0**
Madison	Hebgen Lake	384.8	308.2	154.3	212.1
	Ennis Lake	41.0	39.0	38.7	34.4
Gallatin	Middle Creek	8.0	5.3	4.4	4.7**
Missouri	Canyon Ferry	2,043.0	1,985.0	1,419.0	1,628.0**
	Hauser & Helena	61.9	59.0	56.2	46.9
	Lake Helena	10.4	9.4	8.4	6.1**
	Holter Lake	81.9	59.1	74.4	57.1
	Smith River	10.7	10.1	5.2	8.2**
	Ackley Lake	5.8		1.8	4.0
	Durand	7.0	7.0	3.4	6.2
	Martinsdale	23.1	12.4	7.6	11.4
	Deadman's Basin	72.2	60.8	15.0	49.4**
	Fort Peck	19,410.0	10,230.0	8,129.0	12,003.0
Sun-Teton	Gibson	105.0	55.7	74.4	70.6
	Willow Creek	32.3	27.8	14.2	21.1
	Pishkun	32.0	20.8	25.6	20.7
Marias	Lower Two Medicine	16.6		0.0	1.9
	Four Horns	19.2		13.7	9.0
	Swift	30.0	18.6	24.5	27.3
	Lake Francis	112.0	67.0	82.5	99.9
	Tiber	1,313.0	647.0	647.6	656.9**
Milk	Fresno	127.2	67.5	69.4	103.0
	Nelson	66.8	40.6	19.4	37.1
	Lake Sherburne	66.1		-	24.8
Yellowstone	Mystic Lake	20.8	3.8	1.4	3.3
	Tongue River	68.0		-	17.4
	Cooney	27.5	21.8	15.1	14.7

1/ Sum of four small reservoirs on west side of Flathead Lake.
2/ Sum of eight small reservoirs in Mission Valley not including Jocko Lake.

NOTE: ALL AVERAGES BASED ON 1943-1957 (15 YEAR PERIOD). **AVERAGE FOR PERIOD OF RECORD

RESERVOIR STORAGE DATA

AS OF APRIL 30, 1951

(1000 acre feet)

BASIN	RESERVOIR	DEFINITE CAPACITY	RECENT STORAGE: THIS YEAR	RECENT STORAGE: LAST YEAR	RECENT STORAGE: AVERAGE
COLUMBIA RIVER BASIN					
Flathead	Hungry Horse	3,423.0	2,535.0	2,321.0	2,042.0**
	Flathead Lake	1,791.0	966.5	1,119.0	939.0
	Swan 1/	45.2	32.2	34.2	30.6
	Mission Valley 2/	100.3	38.2	41.2	46.8
Clark Fork	Georgetown Lake	31.0	24.0	20.9	21.4
	Noxon	334.6	117.2	132.2	
Black Rock	Cross	34.9	27.8	24.0	32.5
MISSOURI RIVER BASIN					
Beaverhead	Lima	84.0	44.5	53.3	59.9
Ruby	Ruby	36.5	32.4	36.3	27.0**
Madison	Hebgen Lake	391.6	308.2	154.3	212.1
	Ennis Lake	41.0	39.0	35.7	34.4
Gallatin	Middle Creek	8.0	3.3	4.4	4.7**
Missouri	Canyon Ferry	2,043.0	1,955.0	1,419.0	1,628.0**
	Hauser & Holmes	41.9	40.0	36.2	45.9
	Lake Helena	10.4	9.4	8.4	6.1**
	Nelson Lake	93.8	59.2	74.4	57.1
	Smith River	10.7	10.1	5.3	5.2**
	Ackley Lake	5.8		1.8	4.6
	Tiber	7.0	7.0	3.4	6.2
	Martinsdale	23.2	12.4	7.0	11.4
	Sweetwater Basin	72.3	60.9	15.0	19.4**
	Fort Peck	19,410.0	10,290.0	8,129.0	10,003.0
Sun-Teton	Gibson	105.0	55.3	72.4	70.8
	Willow Creek	32.3	27.8	14.2	21.1
	Pishkun	34.0	20.8	27.6	20.7
Marias	Lower Two Medicine	16.0		0.0	3.9
	Four Horns	19.2		13.7	9.0
	Swift	20.0	18.6	24.3	27.2
	Lake Frances	172.0	67.0	82.5	9.9
	Tiber	1,313.0	647.0	647.0	645.9**
Milk	Fresno	127.2	62.5	59.4	101.0
	Nelson	66.8	40.6	17.4	37.1
	Lake Sherburne	65.1		-	24.8
Yellowstone	Martin Lake	20.8	2.8	1.4	3.1
	Tongue River	68.0		-	17.4
	Cooney	27.3	21.8	15.1	14.7

1/ Sum of four small reservoirs on west side of Flathead Lake.
2/ Sum of eight small reservoirs in Mission Valley not including Jocko Lake.

NOTE: All storage data of 1949-1951 (to date 1951). **Average for years of record

Agencies Cooperating in Collecting Data Contained in this Bulletin

U. S. Forest Service
Region I, Missoula, Montana

U. S. Geological Survey
Helena, Montana

U. S. Army Corps of Engineers
Portland, Oregon
Seattle, Washington
Omaha, Nebraska
Riverdale, N. D.

U. S. Indian Irrigation Service
St. Ignatius, Montana

U. S. Weather Bureau
Helena, Montana

U. S. Fish & Wildlife Service
Red Rock Lakes Refuge
Monida, Montana

U. S. Bureau of Reclamation
Billings, Montana
Boise, Idaho

Montana Power Company
Butte, Montana

Agricultural Experiment Station
North Montana Branch Station
Havre, Montana

State Water Conservation Board
Helena, Montana

National Park Service
Yellowstone National Park
Glacier National Park

Montana Experiment Station
Montana State College
Bozeman, Montana

Bonneville Power Administration
Portland, Oregon

Montana State School of Forestry
Montana State University
Missoula, Montana

Soil Conservation Service
Montana, Wyoming, Idaho

Soil Conservation Districts
Montana Counties

Johnson Flying Service, Inc.
Missoula, Montana

Water Rights Branch
Dept. of Lands & Forests
Victoria, British Columbia

Department of Northern Affairs
& National Resources
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Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry

"The Conservation of Water begins with the Snow Survey"